

ABSTRACT

In order to achieve a uniform temperature distribution with a high level of efficiency while minimizing any increase in production cost, a heat exchanger adopts a four-pass structure, comprising a plurality of tubes disposed so as to distribute a coolant along a top-bottom direction over two rows to the front and rear along the direction of airflow, a first upper tank portion communicating with the upper end of the group of tubes disposed in one of the tube rows, a second upper tank portion communicating with the upper end of the group of tubes disposed in the other tube row, a first lower tank portion communicating with the lower end of the group of tubes disposed in the one tube row, a second lower tank portion communicating with the lower end of the group of tubes disposed in the other tube row, a communicating passage that communicates between one end of the first upper tank portion and one end of the second upper tank portion, a partitioning means for partitioning the first upper tank portion and the second upper tank portion at substantial centers thereof, an inflow port communicating with the other end of the first upper tank portion, through which coolant from an outside source flows in and an outflow port communicating with the other end of the second upper tank portion, through which coolant flows out to the outside. The heat exchanger is characterized in that the area of the opening at the inflow port is set smaller than the area of the opening at the outflow port and that the center of the inflow port opening is set at a position higher than the position of the center of the outflow port opening.